

Reflection

Architecture of server was restructured after the planning phase. The biggest change was in separating logic and data classes.

Managers

Originally, I wanted to store logic or manager class together with its data classes, but after getting the feedback I realized that it would be better to store logic and data related classes in two different packages.

Business Rules

Based on Open Closed Principle and to reach better level of abstraction, I use two Interfaces, one for map related rules and one for player related. These interfaces are later extended by the real specific business rule classes.

Also, I used Test Driven Development principle during implementation of Map related business rule classes. It helped to implement the classes with better understanding what to expect and debugging phase was short, even though the implementation phase took a bit longer.

Exceptions

I created additional Exceptions for specific cases. All exceptions extend `GenericException` so Spring boot processes them respectively. All the exceptions are stored in the same package.

Abstract classes

During planning phase to avoid code duplication and adhere to DRY and OCP principles, I introduced generic abstract classes `GameMap` and `GameMapTile`. To additionally increase flexibility of code. These classes were supposed to be extended by `FullMap` and `HalfMap` classes. But during implementation I realized that `HalfMap` class was not necessary and was making code more complex, so I was using only `FullMap` related classes. I still call `GameMap` class to create better abstraction and for possible future extensions, but for now `GameMap` class is extended only by `FullMap` class.

Data sharing

In the context of sharing data between the Manager classes, I decided to store shared data in the `GameEntity` class, in the face of avoiding data duplication, neglecting using global variables, to achieve better reusability. `GameEntity` class is the “only source of truth” for logic classes. `GameEntity` class also helps to track and control all the games.